

In the Specification

Please amend paragraph 23 as follows:

FIG. 3 illustrates a modified internal schematic of the voltage controlled oscillator (VCO) circuit 11 of FIG. 2 represented by the VCO 11A, in accordance with embodiments of the present invention. Note that although the VCO circuit 11A of FIG. 3 is described with reference to the phase-locked loop (PLL) circuit 2 of FIG. 1, the VCO circuit 11A of FIG. 3 may be used in any electrical circuit requiring a VCO known to a person of ordinary skill in the art such as, *inter alia*, communications circuits, servo circuits, etc. In contrast with the VCO circuit 11 of FIG. 2, the VCO circuit 11A of FIG. 3 comprises a diode 44. The diode 44 in FIG 3 comprises a FET (n-channel (NFET), p-channel FET (PFET), etc) with a gate electrically shorted to a drain such that the FET functions as a diode. Note that the diode 44 may comprise any diode known to a person of ordinary skill in the art. Additionally, the diode 44 may comprise a bipolar transistor with a base shorted to a collector such that the bipolar transistor functions as a diode. The diode 44 is electrically connected in parallel with the LC tank circuit 39 and the drive circuit 37. As the amplitude of oscillation of the first voltage at the first node 27 and the second voltage at the second node 29 increases or decreases, the third voltage at node 41 also increases or decreases accordingly. The diode 44 limits an amplitude of the first voltage and the second voltage by limiting an amplitude of the third voltage at node 41 (the third voltage is an average of the first voltage and the second voltage). The diode 44 limits an amplitude of the third voltage by shunting to ground any extra current away from the transistor 31 and the transistor 33. As the amplitude of oscillation increases, the third voltage on node 41 increases and the diode 44 conducts more current thereby reducing the amplitude of oscillation. Likewise, as the amplitude

of oscillation decreases, the third voltage on node 41 decreases and the diode 44 conducts less current thereby increasing the amplitude of oscillation. During a temperature change to any of the circuitry within the VCO 11A (e.g, drive circuit 37, tank circuit 39, diode 44, etc.), the diode 44 maintains an about constant amplitude of oscillation. An about constant amplitude of oscillation is defined herein including in the claims as an amplitude that does not vary over time by more than 300 millivolts. Additionally, the diode 44 maintains an about constant amplitude of oscillation during a change of oscillation frequency or when the oscillation frequency comprises a high frequency (e.g., a frequency greater than 2500 Mhz). The nearly constant amplitude of oscillation is shown by the graph in FIG. 4 as described, *supra*.